

## REMARKS

This Amendment and Request for Reconsideration ("Amendment") is in response to the August 29, 2005 Office Action ("Office Action"). Claims 1-67 are pending, Claims 61-67 were previously withdrawn from consideration.

## INTERVIEW SUMMARY

Applicants thank the Examiner for the telephonic interview on October 24, 2005 with Applicants' Agents Lisa Seaney (Reg. No. 56,246) and Shannon Mrksich (Reg. No. 36,675) and Assignee's representative Mark Penfold. During the interview, the parties discussed the August 29, 2005 Office action. More specifically, the parties discussed that compounds containing a methyl substituent in the ring attached to the sulfono group are not included in Applicants' genus claim 1. In addition, data was presented supporting unexpected properties for consideration by the Examiner.

## SUPPORT

### Amendments to the Claims

Claims 1-67 remain in this application. Claims 1, 13, 27-29 and 61 are amended. Typographical errors were corrected in claims 1, 13, 27-29, and 61. Support for the amendment to the claim 1 is found throughout the specification, for example: at page 23, paragraph 98.

## CLAIM REJECTIONS

In the Office Action, claims 1-3, 15-18, 25-28, 30-34, 36, 40-50 and 53-60 stand rejected under 35 U.S.C. § 102 (b) as allegedly being anticipated by Wu *et al* ("Synthesis of Substituted Amides and Their Bioactivity," Yingyong Huaxue (1995), 12(4), 80-83). Claims 1-3, 15-18, 25-28, 30-34, 36, 40-51, 53-55, 57, 58 and 61-67 stand rejected under 35 U.S.C. § 102 (b) as allegedly being anticipated by Schewe *et al* (DE 3544409). Claims 1-3, 5, 21, 25-28, 40-48, 56, 57 and 59 stand rejected

under 35 U.S.C. § 102 (b) as allegedly being anticipated by Sannicolo *et al* (Chem Abst. 106:175880). Claims 1-4, 15-18, 25-28, 30-32, 34, 36, 40-50, and 53-59 stand rejected under 35 U.S.C. § 102 (b) as allegedly being anticipated by Yavorskii (Chem Abst. 103:160483). Claims 1-4, 21, 25-28, 40-48, 54-57 and 59 stand rejected under 35 U.S.C. 102(b) over Hellwinkel *et al* (Chem. Abst. 100:5549). Claims 1-3, 6, 15-18, 25-28, 30-33, 40-50 and 53-39 stand rejected under 35 U.S.C. 102(b) over Fryer *et al* (Chem. Abst. 97:72335). Claims 1-3, 6, 15-18, 25-28, 30-33, 40-50 and 53-39 stand rejected under 35 U.S.C. 102(b) over Field *et al* (Chem Abst. 80:37186). Claims 1-4, 6, 15-18, 21, 25-28, 30-34, 36, 40-50 and 53-39 stand rejected under 35 U.S.C. 102(b) over Kametani *et al* (Chem Abst. 73:77127). Claims 1-4, 6, 15-18, 21, 25-28, 30-34, 36, 40-50 and 53-39 stand rejected under 35 U.S.C. 102(b) over MacDonald *et al* (Chem Abst. 71:61183). Claims 1-4, 6, 15-18, 21, 25-28, 30-34, 36, 40-50 and 53-39 stand rejected under 35 U.S.C. 102(b) over Reeder *et al* (Chem Abst. 70:37850). Claims 1-3, 22, 25-28, 32-35, 40-48 and 53-39 stand rejected under 35 U.S.C. 102(b) over Hromatka *et al*.<sup>1</sup>

Claims 1-3, 15-18, 25-28, 30-34, 36, 40-50 and 53-39 stand rejected 35 U.S.C. § 103(a) as allegedly being obvious over Wu *et al* ("Synthesis of Substituted Amides and Their Bioactivity," Yingyong Huaxue (1995), 12(4), 80-83). Claims 1-60 stand rejected 35 U.S.C. § 103(a) as allegedly being obvious over Schewe (DE 3544409) in view of Tularik *et al* (WO 01/00579). Claims 1-60 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of copending application 10/848,836.

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<sup>1</sup> No citation for Hromatka *et al* was provided. For the sake of this reply, Applicant have assumed the rejection was over Hromatka *et al*, Chem Abst. 69:19132, which accompanied the Office Action.

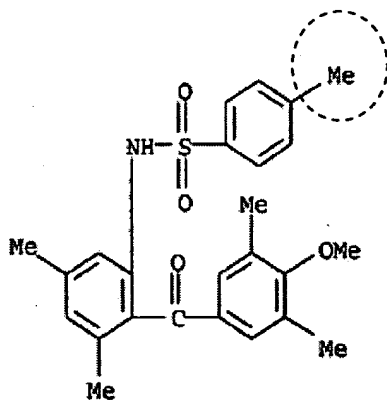
**The Claims are Not Anticipated**

**Sannicolo; Yavorskii *et al*; Hellwinkel *et al*; Fryer *et al*; Field *et al*;  
Kametani *et al*; MacDonald *et al*; Reeder *et al*; and Hromatka *et al***

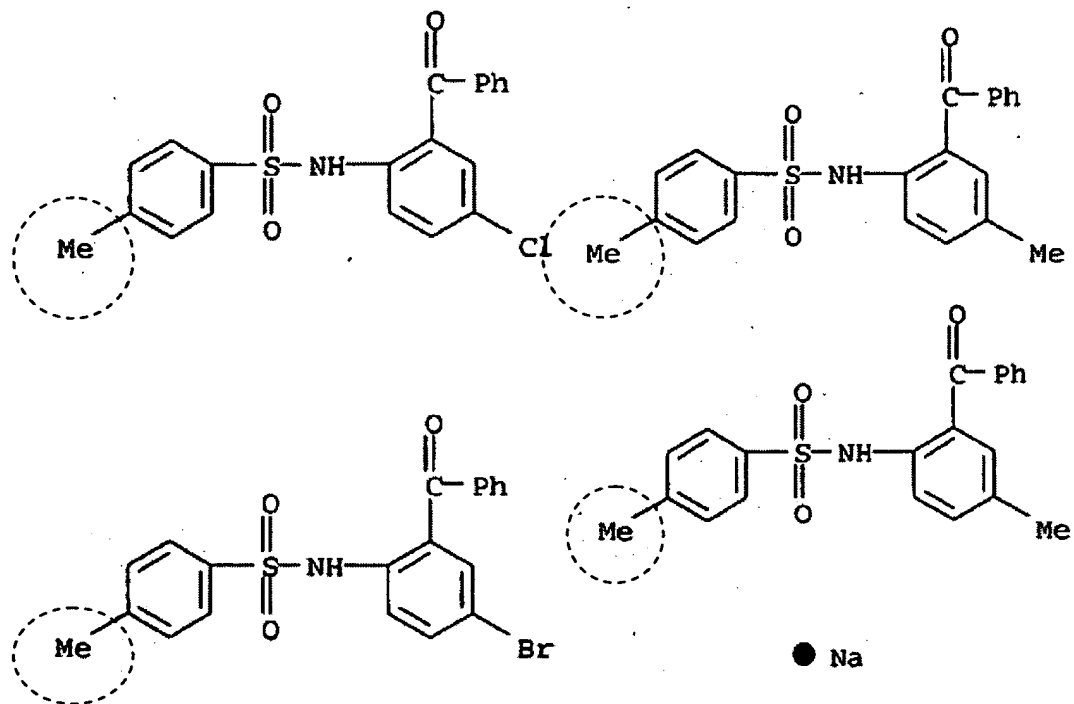
Applicants respectfully traverse the rejections over Sannicolo; Yavorskii *et al*; Hellwinkel *et al*; Fryer *et al*; Field *et al*; Kametani *et al*; MacDonald *et al*; Reeder *et al*; and Hromatka *et al*. For each reference, the allegedly anticipatory compounds cited in the Office action do not read on applicants' claims.

Each of the allegedly anticipatory compounds in these references contains a methyl substituent in the ring attached to the sulfono group. The structures of the cited compounds are shown below with the methyl substituent circled.

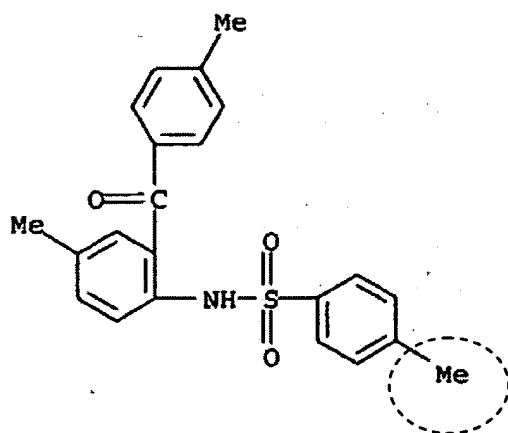
**Sannicolo:**



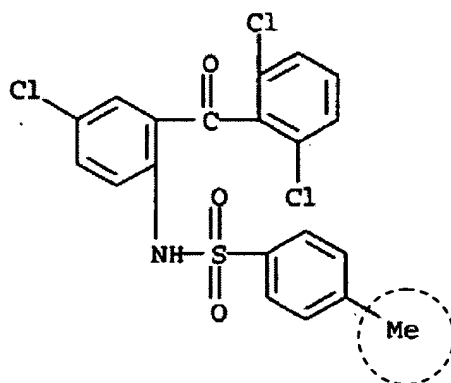
**Yavorskii *et al*:**



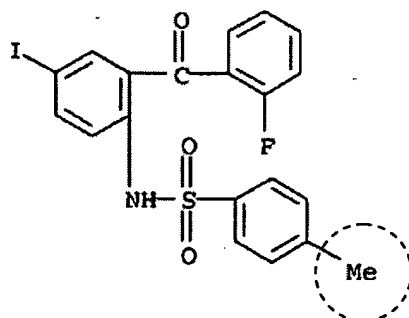
Hellwinkel et al



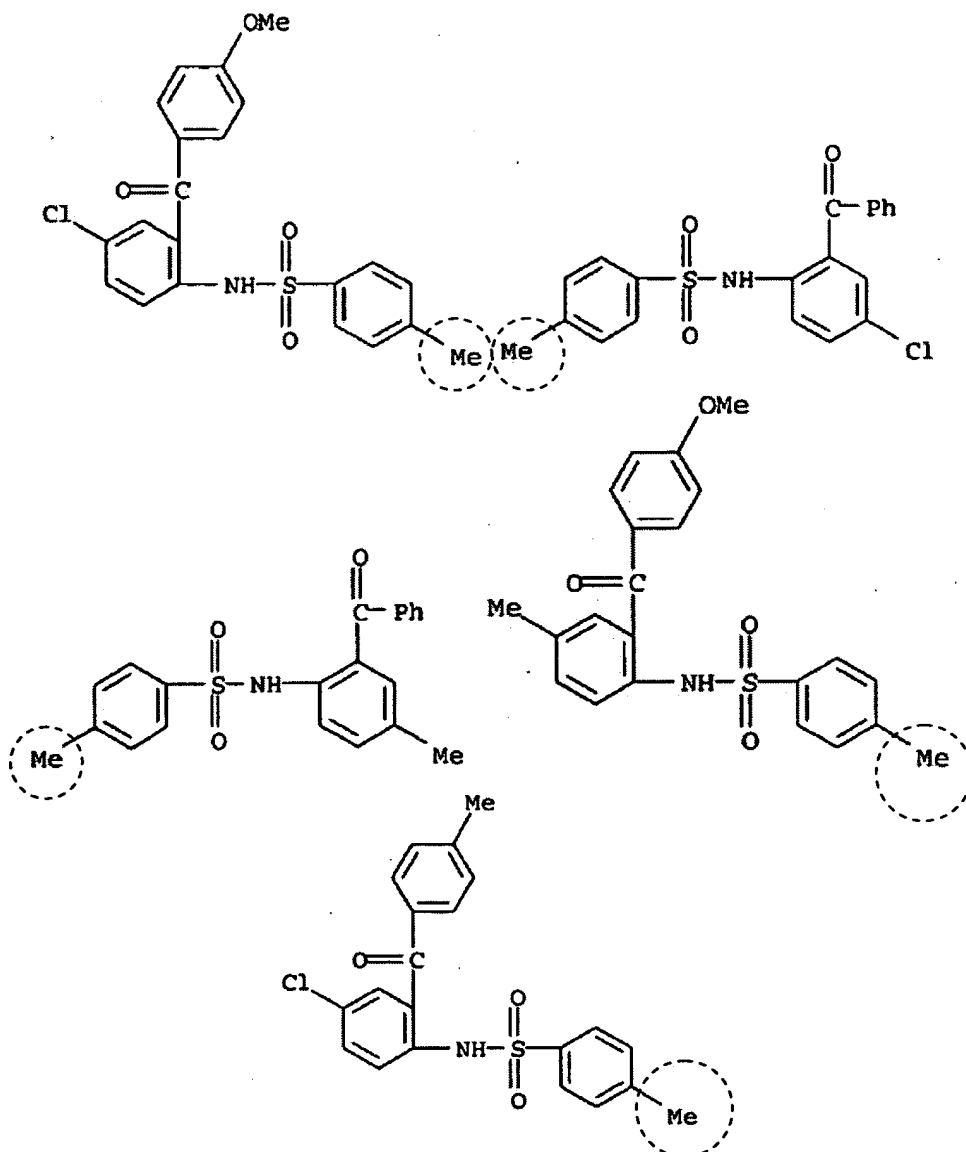
Fryer et al.



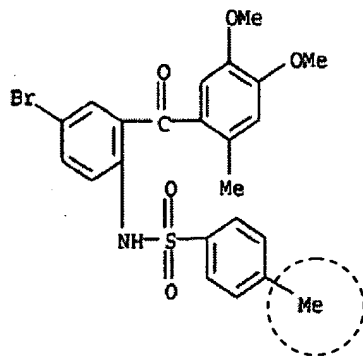
Field et al.



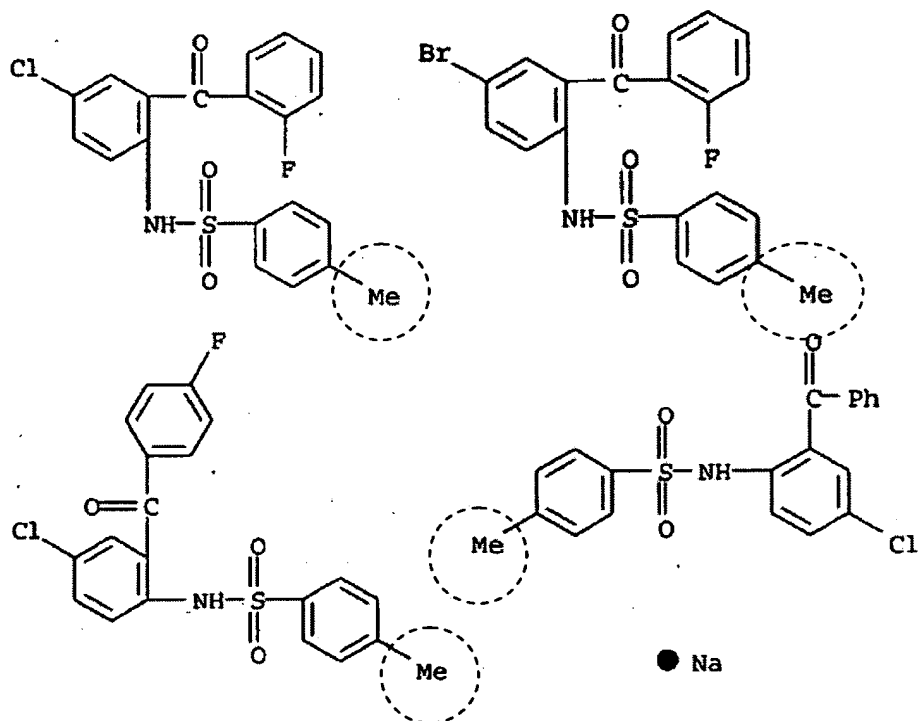
Kametani et al.



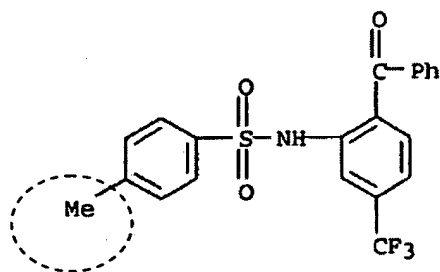
MacDonald et al.



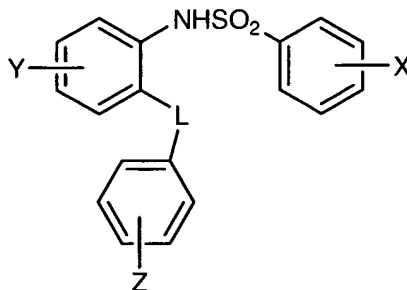
Reeder et al:



Hromatka et al:



Applicants' formula (I) is shown below:



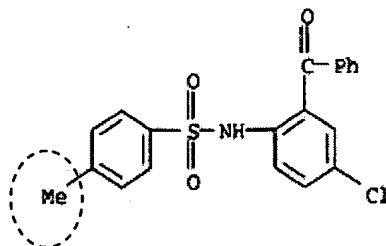
As originally filed, claim 1 of this application recites that substituents X, which are substituents in the ring attached to the sulfono group, include “unsubstituted C<sub>2-8</sub> alkyl, [and] substituted C<sub>1-8</sub> alkyl”. This description of alkyl substituents does not include methyl substituents which are unsubstituted C<sub>1</sub> alkyl. As such, compounds with methyl substituents in the ring attached to the sulfono group are not anticipatory.

Because each of the compounds of Sannicolo; Yavorskii *et al*; Hellwinkel *et al*; Fryer *et al*; Field *et al*; Kametani *et al*; MacDonald *et al*; Reeder *et al*; and Hromatka *et al* cited in the Office action have a methyl substituent in the ring attached to the sulfono group, these compounds do not anticipate applicants claims. Applicant’s respectfully request that the rejections under 35 U.S.C. § 102 (b) over Sannicolo; Yavorskii *et al*; Hellwinkel *et al*; Fryer *et al*; Field *et al*; Kametani *et al*; MacDonald *et al*; Reeder *et al*; and Hromatka *et al* be withdrawn.

### **Wu *et al***

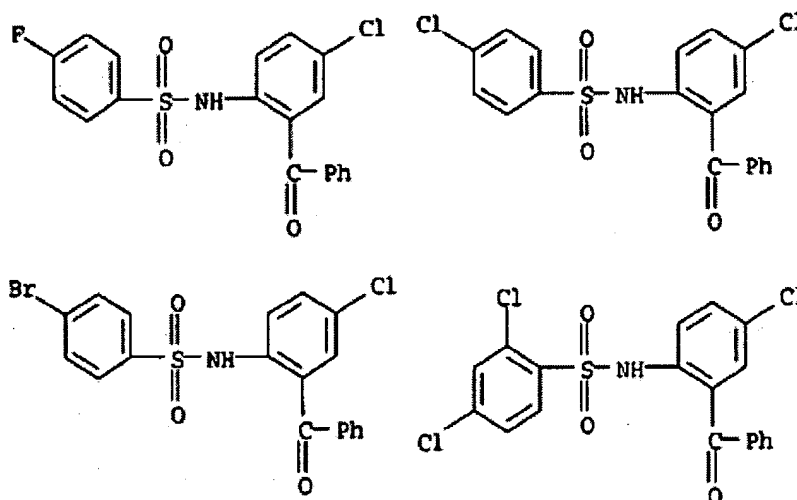
Applicants note for the record that a copy of the journal article by Wu *et al*, “Synthesis of Substituted Amides and Their Bioactivity,” Yingyong Huazue (1995), 12(4) 80-83), was not provided, nor the Chem. Abst. reference provided upon request. Applicants have referred to the June 27, 2005 “Examiner’s search strategy and results” on PAIR for the Wu *et al*, Chem. Abst. 123:285437 reference provided therein.

The Office action contends that N-(4-Cl, 2-benzoylphenyl)-4-methylphenylsulfonamide, shown below, is anticipatory:



As previously presented, because this compound has a methyl substituent (circled) in the ring attached to the sulfono group, this compound does not anticipate applicants' claims.

Regarding the Wu "additional anticipating compounds," Applicants have considered the following four formulae in Chem. Abst. 123:285437 to be the "additional anticipating" compounds of Wu referred to in the Office action:



Rejection over Wu in view of the compounds above has been obviated by appropriate amendment. Claim 1 has been amended to recite:

...with the proviso that when L is  $-\text{C}(\text{O})-$ , X is 4-halogen, and Z is hydrogen, Y is other than hydrogen, 4-chloro, or 4-methyl.

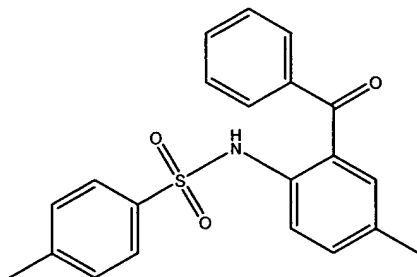
Support for the amendment is found throughout the specification, for example, at page 23, paragraph 98.



As amended, claim 1 does not include the compounds of Wu. In the four Wu compounds above, L is  $-C(O)-$ , X is 4-halogen (F, Cl or Br), Z is hydrogen, Y is 4-chloro. Thus, the compounds of Wu are not anticipatory of Applicants claims, and Applicants respectfully request that the rejection under 35 U.S.C. § 102 (b) over Wu *et al* be withdrawn.

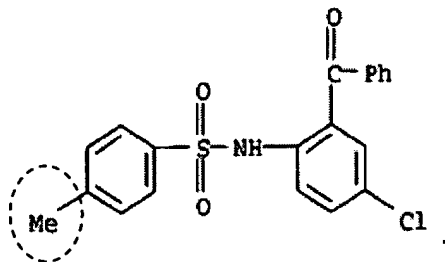
**Schewe *et al***

Claims 1-3, 15-18, 25-28, 30-34, 36, 40-51, 53-55, 57, 58, and 61-67 stand rejected under 35 U.S.C. 102(b) over Schewe *et al*. The Office action contends Schewe discloses N-(4-methyl-2-benzoylphenyl)-4-methylphenylsulfonamide which Applicants believe to be the following structure:



Applicants find no such disclosure in the Schewe reference, either expressly or inherently, and request that the rejection be withdrawn or a page and paragraph number wherein the above compound is disclosed be presented.

In the June 27, 2005 "Examiner's search strategy and results" on PAIR, Applicants find a reference to Schewe, Chem. Abst. 108:131304, that cites N-(2-benzoyl-4-chlorophenyl)-4-methyl-benzenesulfonamide:



For the purposes of this response, Applicants have assumed that this reference was intended by the examiner. As previously presented, because this compound has a methyl substituent (circled) in the ring attached to the sulfono group, this compound does not anticipate applicants' claims.

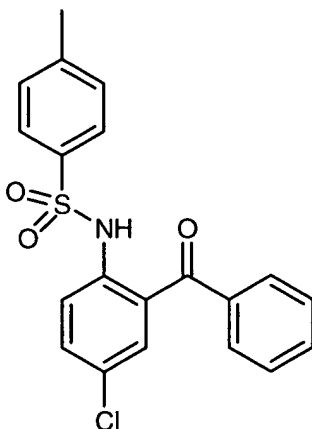
Applicants respectfully request that the rejection under 35 U.S.C. § 102 (b) over Schewe be withdrawn in view of the discussion presented herein.

### **The Claims are Not Obvious**

Claims 1-3, 15-18, 25-28, 30-34, 36, 40-50 and 53-59 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Wu *et al* ("Synthesis of Substituted Amides and Their Bioactivity," Yingyong Huaxue (1995), 12(4), 80-83). Claims 1-60 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Schewe (DE 3544409) in view of Tularik *et al* (WO 01/00579).

"A prima facie case of obviousness based on structural similarity is rebuttable by proof that the claimed compounds possess unexpectedly advantageous or superior properties." MPEP 2144.09 (see also *In re Papesch*, 315 F.2d 381, 137 USPQ 43 (CCPA 1963); and *In re Wiechert*, 370 F.2d 927, 152 USPQ 247 (CCPA 1967). In support of a showing of unexpected properties, the declaration of Dr. Andrew Pennell is presented herewith. Dr. Pennell's qualifications are outlined in paragraphs 1-4 of the attached declaration.

Both Wu and Schewe disclose N-(2-benzoyl-4-chlorophenyl)-4-methyl-benzenesulfonamide:



As presented previously, Applicants' claims do not include the above compound. Dr. Pennell's declaration presents data on the above compound and homologs thereof. Dr. Pennell's testimony in paragraph 17 that N-(2-benzoyl-4-chlorophenyl)-4-methyl-benzenesulfonamide is a poor CCR9 modulator in comparison to other compounds of Applicants' invention is evidence of unexpected properties.

In view of Dr. Pennell's testimony that the claimed compounds of this application have unexpected properties, the present claims are not obvious. Accordingly, withdrawal of this ground of rejection is respectfully requested.

Claims 1-60 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of copending application 10/848,836. Applicants note that no claim in application 10/848,836 has been allowed. Therefore, Applicants request an allowance of this case at this time.

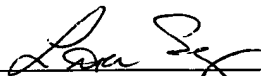
## CONCLUSION

Applicants believe that currently pending Claims 1-60 are patentable. Applicants respectfully request that the Examiner grant early allowance of this application. The Examiner is invited to contact the undersigned agent for the applicants via telephone if such communication would expedite this application.

Amendment. dated November 28, 2005  
Reply to Office Action of August 29, 2005

Appl. No. 10/716,183

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Lisa M. Seaney", is written over a horizontal line.

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Agent for Applicants

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